North America's Leader in Hazardous Material Information Management

1905 Aston Avenue, Carlsbad, CA 92008
Phone (800) 451-8346 Fax (760) 602-8888

MSDS PRODUCT INFORMATION

Date: 10/07/2005

To: MSDS Requester

From: 3E Company

Subject: The MSDS you have requested

[ ] MSDS NOT REQUIRED
In response to your request for a Material Safety Data Sheet, according to the OSHA Hazard Communicatin Standard (Right-to-Know), the following item is an article. Articles are defined in 29 CFR 1910.1200(c). Products such as Drugs, cosmetics, food, or alcoholic beverages, wood or wood products, and tobacco or tobacco products, as defined in 29 CFR1910.1200(b)(6), are exempt from the Hazard Communication Standard. Items that are considered articles, as defined in 29 CFR 1910.1200(c), are also exempt from this Standard. Therefore, the manufacturer is not required to provide an MSDS for this product.

[X] MSDS DISCONTINUED PRODUCT
In response to your request for a Material Safety Data Sheet, the manufacturer has discontinued the product listed below. The MSDS Attached is the most current version, or an MSDS is no longer available.

[ ] MSDS BEST COPY AVAILABLE
The MSDS attached is the best copy available from the manufacturer.

[ ] MANUFACTURER NO LONGER IN BUSINESS
In response to your request for a Material Safety Data Sheet, a current MSDS could not be obtained for this product. It has been determined that the manufacturer listed below is no longer in business. A current address and phone number could not be located.

Manufacturer: Interstate Batteries

Product Name: Workaholic Batteries- Interstate (DISCONTINUED)

3E COMPANY *North America's Leader in Hazardous Material Information Management*
1905 Aston Avenue, Carlsbad, CA 92008
Phone (800) 451-8346 Fax (760) 602-8856

MSDS DISCONTINUED PRODUCT

Date: 10/02/2001

To: MSDS Requester

From: 3E Company

Subject: The MSDS you have requested

In response to your request for a Material Safety Data Sheet, the manufacturer has discontinued the product listed below. The MSDS attached is the most current version, or an MSDS is no longer available.

Manufacturer: Interstate Batteries

ProductName: Workaholic Batteries- Interstate (DISCONTINUED)

JOHNSON CONTROLS

MATERIAL SAFETY DATA SHEET

MSDS No	
L 8	
Date Issued	
Nov. 15, 1985	
Date Revised	
Sept. 15, 1993	

I. Product Identification

Chemical Trade Name (Identity Used on Label)	Chemical Family Classification
Lead Acid Battery	Electric Storage Battery
Synonyms/Common Name	**DOT, IATA and IMO Description**
SLI or Industrial Battery	Battery, Wet, Filled with Acid, UN2794, Class 8
Company Name	**Address**
Johnson Controls Battery Group, Inc.	P.O. Box 591 Milwaukee, WI 53201
Division or Department	
Starting, Lighting, Ignition Division & Specialty Battery Division	
CONTACT	**TELEPHONE NUMBER**
Questions Concerning MSDS	
Industrial Hygiene & Safety Department	Day: (414) 228-3138
Transportation Emergencies	
CHEMTREC	24 Hours: (800) 424-9300

II. Hazardous Ingredients

Material	% by Wt.	CAS Number	Exposure Limits		
			OSHA	ACGIH	Other
Specific Chemical Identity: Lead Common Name: Grid	34	7439-92-1	50 $\mu g/m^3$	150 $\mu g/m^3$	NIOSH 100 $\mu g/m^3$
Specific Chemical Identity: Lead Dioxide Common Name: Lead Oxide	31	1309-60-0	50 $\mu g/m^3$	150 $\mu g/m^3$	NIOSH 100 $\mu g/m^3$
Specific Chemical Identity: Lead Sulfate Common Name: Anglisite	<1	7446-14-2	50 $\mu g/m^3$	150 $\mu g/m^3$	NIOSH 100 $\mu g/m^3$
Specific Chemical Identity: Sulfuric Acid (35%) Common Name: Battery Electrolyte (Acid)	34	7664-93-9	1 mg/m^3	1 mg/m^3	NIOSH 1 mg/m^3
Specific Chemical Identity: Common Name:					
Specific Chemical Identity: Common Name:					

NOTE: The contents of this product are toxic chemicals that are subject to the reporting requirements of section 302 and 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR 355 and 372).

III. Physical Data

Materials (at normal temperatures)	Appearance and Odor
☑ Solid ☑ Liquid	Battery electrolyte (acid) is a clear to cloudy liquid with slight acidic odor. Acid saturated lead oxide is a dark reddish-brown to gray solid with slight acidic odor.
Boiling Point (at 760 mm Hg): Lead 1755°C; Batt. Electrolyte (Acid) 110-112°C	**Melting Point**: Lead 327.4°C
Specific Gravity (H_2O = 1): Battery Electrolyte (Acid) 1.210 – 1.300	**Vapor Pressure** ☒ (mm Hg at 20°C) ☐ (PSIG): Battery Electrolyte (Acid) 11.7
Vapor Density (Air = 1): Battery Electrolyte (Acid) 3.4	**Solubility in H_2O**: Battery Electrolyte (Acid) is 100% soluble in water. Lead – Lead Dioxide are not soluble.
% Volatiles By Weight: Not Determined	**Evaporation Rate (Butyl Acetate = 1)**: Not Determined

IV. Health Hazard Information

NOTE: Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery electrolyte (acid) and lead for exposure that may occur during battery production or container breakage or under extreme heat conditions such as a fire.

ROUTES AND METHODS OF ENTRY

Inhalation

Acid mist generated during battery formation may cause respiratory irritation. Spillage of acid from batteries in confined areas may also lead to exposure to sulfuric acid mist.

Skin Contact

Battery electrolyte (acid) may cause irritative contact dermatitis.

Skin Absorption

Skin absorption is not a significant route of entry.

Eye Contact

Battery electrolyte (acid) will irritate the eyes upon contact.

Ingestion

Hands contaminated by contact with internal components of a battery can cause ingestion of lead/lead compounds. Hands should be washed prior to eating, drinking, or smoking.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Acute Effects

Acute effects of overexposure to lead compounds are: GI (gastrointestinal) upset which may be loss of appetite, diarrhea and/or constipation with cramping, difficulty in sleeping, and fatigue. Exposure and/or contact with battery electrolyte (acid) may lead to acute irritation of the skin, corneal damage of the eyes, and irritation of the mucous membranes of the eyes and upper respiratory system including lungs.

Chronic Effects

Lead and its compounds may cause chronic anemia, damage to the kidneys and nervous system. Lead may also cause reproductive system damage and can affect developing fetuses in pregnant women. Battery electrolyte (acid) may lead to scarring of the cornea and chronic bronchitis as well as erosion of tooth enamel in mouth breathers in repeated exposures.

POTENTIAL TO CAUSE CANCER

The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a Category 1 carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may however result in the generation of sulfuric acid mist.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation

Remove from exposure and consult a physician if any of the acute effects listed above develop.

Skin

Wash thoroughly with soap and water. If acid is splashed on clothing, remove and discard. If acid is splashed in shoes, remove them immediately and discard. Acid cannot be removed from leather.

Eyes

IMMEDIATELY rinse with cool running water for at least 15 minutes. Seek medical attention after rinsing.

Ingestion

Lead/lead compounds: Consult a physician.

Battery Electrolyte (Acid): Do not induce vomiting. Refer to a physician immediately.

MEDICAL CONDITIONS WHICH CAN BE AGGRAVATED BY EXPOSURE

Inorganic lead and its compounds can aggravate chronic forms of kidney, liver, and neurologic diseases. Contact of battery electrolyte (acid) with the skin may aggravate skin diseases such as eczema and contact dermatitis.

V. Fire and Explosion Data

Flash Point (test method)	Autoignition Temperature	Flammable Limits in Air, % by Vol
		Hydrogen
Hydrogen – 259°C	Hydrogen 580°C	LEL – 4.1 UEL – 74.2

Extinguishing Media

Dry chemical, foam, or CO_2.

Special Fire Fighting Procedures

Use positive pressure, self-contained breathing apparatus.

Unusual Fire and Explosion Hazard

Hydrogen and oxygen gases are produced in the cells during normal battery operation, hydrogen is flammable and oxygen supports combustion. These gases enter the air through the vent caps. To avoid the chance of a fire or explosion, keep sparks and other sources of ignition away from the battery.

VI. Reactivity Data

Stability	Conditions to avoid
☐ Unstable ☑ Stable	Sparks and other sources of ignition may ignite hydrogen gas.

Incompatibility (material to avoid)

Lead/lead compounds: Potassium, carbides, sulfides, peroxides, phosphorus, sulfur.
Battery electrolyte (acid): Combustible materials, strong reducing agents, most metals, carbides, organic materials, chlorates, nitrates, picrates, and fulminates.

Hazardous Decomposition Products

Lead/lead compounds: Oxides of lead and sulfur
Battery electrolyte (acid): Hydrogen, sulfur dioxide, sulfur trioxide

Hazardous Polymerization	Conditions to avoid
☐ May Occur ☑ Will Not Occur	High temperature. Battery electrolyte (acid) will react with water to produce heat. Can react with oxidizing or reducing agents.

VII. Control Measures

Engineering Controls

Store lead/acid batteries with adequate ventilation. Room ventilation is required for batteries utilized for standby power generation. Never recharge batteries in an unventilated, enclosed space.

Work Practices

Make certain vent caps are on tightly. Place a minimum of two layers of corrugated cardboard between layers of batteries. When stacking in trailer, stack no more than three layers high. Use a battery carrier to lift a battery or place hands at opposite corners to avoid spilling acid through the vents. Avoid contact with internal components of the batteries.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection

None required under normal handling conditions. During battery formation (high-rate charge condition), acid mist can be generated which may cause respiratory irritation. If irritation occurs, wear a respirator suitable for protection against acid mist.

Eyes and Face

Chemical splash goggles are preferred. Also acceptable are "Visor-Gogs" or a chemical faceshield worn over safety glasses.

Hands, Arms, Body

Vinyl coated, PVC, gauntlet type gloves with rough finish.

Other Special Clothing and Equipment

Safety shoes worn with rubber/neoprene boots or steel-toed rubber/neoprene boots to be worn over socks. Place pants' legs over boots to keep acid out of boots. All footwear must meet requirements of ANSI Z41.1 – Rev. 1972.

VIII. Safe Handling Precautions

Hygiene Practices

Wash hands thoroughly before eating, drinking, or smoking after handling batteries.

Protective Measures to be taken During Non-routine Tasks including Equipment Maintenance

Wear recommended eye protection. If clothing becomes saturated with acid, remove and wash affected area with water for 15 minutes. Discard saturated clothing.

SPILL OR LEAK PROCEDURES

Protective Measures to be taken if Material is Released or Spilled

Remove combustible materials and all sources of ignition. Contain spill by diking with soda ash (sodium carbonate) or quicklime (calcium oxide). Cover spill with either chemical. Mix well. Make certain mixture is neutral then collect residue and place in a drum or other suitable container. Dispose of as hazardous waste.

Wear acid resistant boots, chemical faceshield, chemical splash goggles, and acid resistant gloves. DO NOT RELEASE UNNEUTRALIZED ACID!

Waste Disposal Method

Battery Electrolyte (Acid): Neutralize as above for a spill, collect residue, and place in a drum or suitable container. Dispose of as hazardous waste.

DO NOT FLUSH LEAD CONTAMINATED ACID TO SEWER.

Batteries: Send to lead smelter for reclamation following applicable Federal, state, and local regulations.

OTHER HANDLING AND STORAGE PRECAUTIONS

An eyewash fountain and safety shower should be located in or near the production or storage area(s) for lead/acid batteries. Such storage areas should be equipped with a containment facility which captures spills of acid so that they may be neutralized, collected, and disposed of properly.